REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

Objection to the Specification Under 37 CFR 1.75(d)(1)

The objection to the language of claim 3 has been addressed by amending claim 3 to use the same wording as used in the paragraph bridging pages 4 and 5 of the original specification, and in particular page 4, line 22 to page 5, line 1.

However, the objection to the language of claim 2 is respectfully traversed on the grounds that the objected-to language in claim 2 ("*the cavity's opening faces directly to the bottom opening and the second lens is coaxially implemented with the photo sensor*") is found in lines 10-13 on page 5 of the original specification ("*an opening of the cavity 125 faces directly to the bottom opening of the optical mouse 1 and the second lens 122 is coaxially implemented with the photosensor 13*").

Rejections Under 35 U.S.C. § 103

The rejection of claims 1-6 is under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (figs. 1 and 2) in view of TSENG (5,969,344) is respectfully traversed on the grounds that neither the admitted prior art nor the TSENG patent discloses or suggests an optical mouse having the claimed absorbing layer for absorbing light not directly projected to the photosensor.

In the admitted prior art, an optical mouse transmits light, which is reflected off of a surface and projected to the photosensor. However, because the surface may be irregular, the light might reflect multiple times before reaching the photosensor, which can make it difficult to image the surface and detect movement. The present invention provides a solution to the problem, in the admitted prior art, of indirect reflections from the surface, which decrease the contrast between light and dark used to detect movement. The solution is to add a light absorbing layer to ensure that only light that has reflected from the surface onto which light is projected reaches the photosensor.

In other words, the claimed invention is an optical mouse with a light absorbing layer to absorb light that is not reflected directly from the surface. The use of a light absorbing layer to account for non-direct reflections from a surface to an optical mouse has absolutely nothing to do with the teachings of TSENG, which concern a mechanical mouse with an encoder wheel. In TSENG, light is transmitted from a transmitter to a detector over a fixed path. There is no problem with irregular surfaces and contrast-reducing reflections that might reach the detector. Instead, TSENG teaches a light reflecting or eliminating material coated on a sloping surface portion 32 to refract so-called **"proximity" light** resulting from diffusion of light as working beams passing through the encoder enter the photo-receiver, and thus eliminate interference of the proximity light with the encoder signal.

The TSENG patent very clearly states that the problem addressed thereby is the problem of light C (see Fig. 3)

that diffuses as it enters the receiver. This problem is unique to the type of mouse disclosed in the TSENG patent and has absolutely nothing to do with an optical mouse, or with the problem or reflections and lack of contrast addressed by the present invention.

In view of the above, it can be seen that TSENG does not suggest modification of the optical mouse of the admitted prior art to obtain the claimed invention for at least the following reasons:

- First, the claims recite an **optical mouse**, the light device of the optical mouse producing the incident light, which is illuminated on the surface of a desk and reflected to the photosensor to thus obtain an image. In contrast, the TSENG patent relates to a traditional **wheel-rolling mouse**, in which light is passed through a encoder wheel to accordingly produce sine and square waves (col. 1, lines 30-34), which are employed to count the distance that the rolling wheel moves. Therefore, the problem addressed by the claimed invention, namely the problem of reflections from a surface and lack of contrast due to scattering and multiple reflections, is not present in the TSENG device, and the solution provided by TSENG is not obviously applicable to the problems of the admitted prior art.
- Second, the absorbing layer of the invention is employed to **absorb reflecting light** not directly projected to the photosensor, so as **to increase the light-and-shade contrast** (to stress the corresponding light as the light is directly projected to the photosensor and otherwise, to stress the corresponding shade). In contrast, in

the TSENG patent, the layer of light reflecting or eliminating material coated on the sloping surface portion 32 is employed to **refract "proximity" light** and thus eliminate interference of proximity light with the signal, i.e., working light beams (col. 2, lines 47-53). Accordingly, the function of the claimed absorbing layer is completely different from that of the cited layer of light reflecting or eliminating material.

- Third, the optical mechanism of the present invention, which is employed to capture an image for performing an image comparison so as to determine the mouse movement, is obviously not present in the traditional rolling-wheel mouse of TSENG, which does not need to capture any image to determine mouse movement. As a matter of fact, in the traditional wheel-rolling mouse, mouse movement is determined by counting the number of square waves generated by applying light to a photo detector via a turning wheel. Therefore, there is no reason to apply such an image comparison device to the mouse of TSENG.

Because the TSENG patent teaches a solution to a problem not present in the admitted prior art, namely the problem of "proximity light," it is respectfully submitted that it would not have been obvious to modify the admitted prior art based on TSENG to obtain the claimed invention, and withdrawal of the rejection of claims 1-6 under 35 USC 103 is respectfully requested.

In view of the foregoing remarks, reconsideration and allowance of the application are now believed to be in order, and such action is hereby solicited. If any points

remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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